(c) Remarks

The claims are 12 and 13. Claim 12, the sole independent claim, has been amended has been amended to clarify what is regarded as the invention. Support for this amendment is located throughout the specification including, for instance, all of the Examples, especially Example 3, pages 37-43, wherein one reactor is treated with respect to one high-frequency power supply means, and one impedance regulation means is provided for every reactor, as well as at page 9, lines 21-25. No new matter has been added, and favorable reconsideration is therefore expressly requested.

In the Office Action, claims 12 and 13 were rejected under 35 U.S.C. § 112, second paragraph, for alleged indefiniteness in the limitation beginning with "a plurality of impedance regulation means". To expedite prosecution on the merits but without necessarily conceding the propriety of this rejection, Applicants have amended the claim according to the Examiner's kind suggestion to recite that the impedance regulation means is --provided on the side of each movable reactor to regulate the impedances of each reactor--. In view of the foregoing amendment, Applicants believe the claims to satisfy all of the requirements of Rule 112, and respectfully request withdrawal of the present rejection.

Claims 12 and 13 also stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over the combination of Japanese Patent Publication No. 11-319546 (*Okamura et al.*) with U.S. Patent No. 5,515,986 (*Turlot et al.*). The reasons for this rejection are respectfully traversed.

As amended, claim 12 is directed to a plasma treatment apparatus for individually treating a plurality of reactors having different impedances. In one notable aspect, claim 12 recites that one impedance regulation means is provided between a connecting portion of the high-frequency power supply means on the side of the movable reactor and an electrode on the side of the movable reactor. As discussed in the specification, conventional plasma treatment systems often make it necessary to provide matching devices specifically designed for various conditions, thus increasing both the cost and complexity of construction for the apparatus as a whole. *See* specification, page 7, lines 20-27. Conversely, the above feature enables a simplified production system which further allows for lower cost while at the same time maintaining high operating efficiency and production flexibility. *See* page 12, lines 12-17.

This is accomplished because an embodiment of the impedance regulation means is a matching circuit unit provided in each of the moveable reactor sections as, for example, illustrated in Figure 5. Thus, handling is simplified, along with a reduction of selection errors, since it is unnecessary for a variable capacitor in a high frequency matching device (112) to be adjusted. The respective results between Example 1 and Comparative Example 1 demonstrate that when matching adjustment is not required—as enabled under the present configuration—a more efficient deposition operation results. *See* specification, pages 34 and 35. Consequently, Applicants' invention satisfies a need in the art for a low cost, simplified plasma treatment apparatus capable of matching impedances under different conditions. *See* page 8, lines 10-15.

The Examiner contends that "it would have been obvious . . . to provide the reactors of Okamura et al. with a plurality of impedance regulation means as taught by

Turlot et al. in order to adjust the process conditions for each reactor." Applicants respectfully disagree, and submit that doing so would not only fail to remedy the deficiencies of *Okamura*, but would also preclude attaining the beneficial advantages that the present invention brings to the art.

As summarized at Column 1, lines 16-24, *Turlot et al.* disclose a technique for parallel processing a number of work-pieces. Here, the number of plasma treatment operating cycles is minimized in order to optimize handling effort. Figure 5(c) illustrates how almost the same power is simultaneously supplied from one power supply means to a plurality of reactors to conduct the same processing. *See* Column 7, lines 7-9. For this purpose, the reference teaches that a plurality of reactors are connected to one power supply means.

In contrast, in the present invention, only one reactor is connected to one power supply means (*see*, e.g., Figure 8, wherein each reactor 201 has its own power supply means 510). Although a plurality of reactors having different impedances are successively connected, treatments of different conditions can be accomplished by one matching device, as explained in the specification at page 7, line 5 to page 8, line 15. Evidence of such operation likewise appears in Example 1. Accordingly, *Turlot et al.* fail to teach or suggest "a high-frequency power supply means for supplying high-frequency power into each movable reactor having been internally-evacuated, to cause glow discharge to take place in the movable reactor ", as recited in claim 12.

More significantly, however, unlike the present invention, in *Turlot* there is provided an impedance regulation means (inductions) for each electrode divided from the RF Power Matching Box. *See* Column 7, lines 7-9 and Figure 5(c).

Conversely, under Applicants' configuration, only a single impedance regulation means is provided for each reactor, between the connecting portion and the electrode on the side of the reactor, with a plurality of electrodes present in each said reactor. This is explained in the specification at page 27, lines 4-9 and page 28, lines 8-13 (Example 1), and is illustrated in Figure 6A. Here, the plurality of electrodes 211 within the reactor 201 are all (rather than individually) linked to a single impedance regulator 240. As a result of this alternative construction, when the reactors having different impedances are used, matching devices specifically designed for respective conditions are not required. Thus, the present configuration achieves a beneficial consequence in the art by lowering the cost and improving efficiency for such apparatus. *See* specification, page 8, lines 10-15.

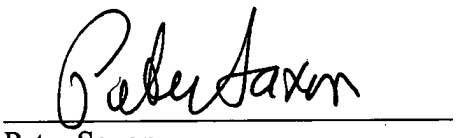
According to the MPEP, "[a] *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention." MPEP § 2144.05(III) at 2100–143 (citing *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997)). Because *Turlot* teaches providing an impedance regulation means for each electrode within a reactor, production cost is inevitably increased and construction needlessly complicated, thereby teaching away from Applicants' invention. Moreover, by not providing an impedance regulation means on the side of each reactor, *Turlot* invites a longer and more complicated deposition operation since high frequency matching devices in the high frequency power supply means will likely need to be replaced in order to match different impedances. The Examiner notes at page 5 of the Office Action that "Turlot was simply applied for the teaching of a plurality of impedance regulations means provided correspondingly to the impedances in each reactor". However,

based on the foregoing, Applicants respectfully believe this not to be the case; instead, *Turlot* is understood as merely teaching an impedance regulation means provided for each electrode.

Accordingly, Claim 12 is seen as patentable over any possible combination of the cited references, and withdrawal of the rejection under 35 U.S.C. § 103(a) is earnestly requested. Claim 13 depends from claim 12, and is believed to be patentable for at least the same reasons as discussed above. Thus, the claims should be allowed and the case passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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